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PALESTINE: 1918 --- A MISSING LINK
IN THE EVOLUTION OF THE
OPERATIONAL ART

A Monograph
by
Major Gary J. Tocchet
Air Defense



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School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

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ABSTRACT

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The monograph is structured around a systematic examination of the decisions and choices combatants made to balance "ends," "means," "ways," and "risks." Inherent in the discussion of "ways," is an analysis of how the EEF made the transition from static trench warfare to operational maneuver. Finally, this paper presents conclusions about where this campaign fits in the history of the evolution of the military art and implications as to its relevance to future operational level planners and commanders.

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TABLE OF CONTENTS

SECTION	PAGE
I. Introduction	1
II. From Strategic Goals To Operational Aims	6
III. From Aims To Means	11
IV. From Means To Ways	22
V. Assessing and Addressing Risk	31
VI. Some Conclusions and Implications	37
Maps	40
Endnotes	44
Bibliography	46

I. INTRODUCTION

The First World War, for most students of the military art, began with the distorted execution of Germany's Schlieffen Plan. The war quickly changed from a war of operational maneuver to one characterized by a bloody struggle of attrition in static trench warfare. Basing their arguments on the enormous casualty lists, critics of the war proclaim that incompetent commanders were overwhelmed by emerging technologies. War became cumbersome and less decisive since these commanders were unable to break the ensuing tactical stalemate. As the story continues, when the German Army finally adopted its famous *Hutier* tactics later in the war, it was too little too late and tactical success could not be exploited.

For those who desire to trace and understand the evolution of the operational art, later witnessed in varying degrees in its modern form in World War II, World War I is often overlooked because it is viewed as a step backwards in the evolution of warfare. Unfortunately, this is an overgeneralized and inaccurate assessment drawn from military operations on the Western Front. Stagnant attrition warfare did not dominate operations everywhere.

More careful historical studies indicate that successful military operations on the Eastern Front and during the Russian Civil War have had some important relevancy to the evolution of the operational art. The U.S.

Army's current Field Manual 100-5, Operations, cites the Battle of Tannenberg in East Prussia in 1914 as "a closer parallel" than the Battle of Kursk in 1943 "to the fluid conditions, rapid maneuver, and calculated risks of contemporary operations."¹ Similarly, Jacob Kipp, in a study entitled "Mass, Mobility, And The Red Army's Road To Operational Art, 1918-1936," has found the Russian experience in their civil war to be "qualitatively different from that of World War I on either the Western or the Eastern Fronts."² The low density of forces, the ineffectiveness of logistical services, and the instability of the rear created conditions for a war of maneuver. The resurgence of cavalry as a combat arm during this period, argues Kipp, was an instrumental experience that led to future Soviet operational concepts that emphasized offensively-oriented maneuver and mechanization.

Less known and rarely studied are a series of successful Allied campaigns that took place in Africa, Mesopotamia, and in Palestine after the infamous debacle at Gallipoli. Of these, the Palestine Campaign of 1918 offers the most fascinating insights into a number of the intricate interrelationships of warfare: the dynamics between military action and politics, the integration of air, land, and sea operations, the importance of terrain and weather in operational concepts, the use of combined arms at the tactical level, the complexity of waging combined warfare with

allies, the centrality of logistics to the conduct of a campaign, and the direction, use, and support of irregular forces.

Some have dismissed this final campaign in Palestine as fundamentally irrelevant. They argue that this theater was a mere side show and at most provided only a morale boost for the Allied cause, particularly when Jerusalem was wrenched from the hands of the "godless" Turks and Germans. Others see this theater simply as a stage for the overly romanticized exploits of T. E. Lawrence and his Arab marauders. Still others see this campaign as a skewed clash between the British Egyptian Expeditionary Force (EEF) and the outnumbered and outclassed German-Turkish force at the outmost periphery of the European theater of war. Those who have tried to popularize the conventional operations in this theater have often focused upon the colorful story of its great cavalry action.³ Critics quickly dismiss these cavalry operations as dangerous anachronisms that only hindered the development of modern armored warfare doctrine. Yet, despite these criticisms, Liddell Hart argued that the campaign's "operations deserve to rank among history's masterpieces for their breadth of vision and treatment."⁴

This paper analyzes the campaign for the conquest of Palestine in 1918 as conducted by General Sir Edmund Allenby while he was in command of the EEF. We will find that Allenby's

campaign offers an almost textbook example of operational art because it illuminates the relationship between the theory and reality. The structure of the following analysis focuses upon the theory of operational planning and the development of operational maneuver---two ingredients clearly missing or poorly developed in the warfare waged on the Western Front. Instead of conducting a conservative campaign based upon weight and materiel in a classic battle of attrition, Allenby devised a plan that relied on maneuver, speed, and surprise.

Specifically, we will examine the relationship of military "aims" and "ends" to strategic aims and ends. Palestine, a theater of secondary importance, was profoundly affected by political goals. Closely related to ends are the "means" the belligerents had to apply to achieve their ends. We will study the various means each had at their disposal and how they assessed their capabilities. Tightly linked to means were the "ways." The opposing forces considered different options and decided how to use their means to achieve their ends. Crucial to this discussion is an analysis of Allenby's development of "operational maneuver."

Current U.S. Army doctrine emphasizes that the primary dynamics of combat power to defeat the enemy at both the operational and tactical levels are maneuver, fire power, protection and leadership.⁵ Although these dynamics are interrelated our primary focus will be upon "maneuver"

because of its priority in Allenby's success. FM 100-5 states, "manuever is the movement of forces in relation to the enemy to secure or retain positional advantage." "It is the means of concentrating forces at the critical point to achieve surprise, psychological shock, physical momentum, and moral dominance." The doctrine further suggests that "effective maneuver keeps the enemy off balance and thus also protects the force." Finally it argues, "It continually poses new problems for the enemy, renders his actions ineffective, and eventually leads to his defeat."⁶ Operational maneuver extends this effect to the theater level, setting the terms of battle or creating untenable situations for the enemy throughout the contested region. The other dynamics of combat power will be discussed in relation to their support of maneuver.

The final operational planning factor we will discuss is the assessment of "risks." Leaders have to consider these when developing their operational concepts. In many ways, risk is a measure of the friction of war. It is also entails a calculated exposure of a vulnerability to attain some advantage. How leaders went about minimizing and considering risk is an important element in the operational planning process that is well illustrated in this campaign.

Considering the framework above, this study attests that the Palestine Campaign of 1918 provides an important

step, a missing link if you will, in the evolution of the operational art. There was a sequence of operations and battles that capitalized on the realities and conditions of Palestine in 1918. As we shall see, this campaign stands as a World War I precursor to World War II's *blitzkrieg*. After assessing the risks, Allenby used his means by developing ways to achieve an operational end that led to the accomplishment of a strategic aim. The manner in which these were done suggests some important lessons and implications to current operational planners.

II. FROM STRATEGIC GOALS TO OPERATIONAL AIMS

Although a simple narrative of the campaign would begin in September 1918, a theoretical analysis of this campaign properly begins with a definition of some key terms and a review of the events in this theater prior to September 1918. As discussed earlier, a properly conceived operational plan should be structured theoretically around the concepts of aims, means, ways, and risks. In warfare the commander makes a key decision when he establishes the ends or aims. A commander is working at the "operational level of war" when he plans for the "employment of military forces to attain strategic goals in a theater of war or theater of operations

through the design, organization, and conduct of campaigns and major operations."⁷ Current U.S. Army doctrine asserts that operational commanders must answer this question: "What military condition must be produced in the theater of war or operations to achieve the strategic goal?"⁸ The selection of the end or aim implies a clear visualization of an end-state toward which all military action is directed.

Three main influences shaped strategic goals in General Allenby's theater prior to his arrival in June 1917 and during his command of the EEF (Map# 1, page 40.).⁹ First, the original object of placing Allied forces in Egypt was to protect the Suez Canal, a vital main line of communication aptly described by the Germans as the "juglar vein of the British Empire."¹⁰ After beating back a weak Turkish attack on the canal in 1915 and observing the Allied failure at Gallipoli, the EEF, under Lieutenant General Sir Archibald Murray, hesitantly set out from the canal in 1916. Murray's intent was only to secure control of the Sinai Desert to prevent the German and Turkish forces from establishing forward bases to threaten the canal. It was not until the First Battle of Gaza in March 1917 that the War Cabinet in England, having little to show for their efforts on the Western Front, seriously considered the conquest of Palestine.

Setting strategic goals and objectives, then, was a dynamic process for a force initially conceived and structured

to defend the canal. This process was strongly shaped by the second and third influences: activity in other theaters and by British domestic and international politics. British domestic politics often centered around the debate between the direct and indirect approach supporters. The ebb and flow of this debate often affected the EEF's mission and force levels. Murray was replaced by Allenby when he failed in repeated attempts, reminiscent of Western Front battles, to take Gaza, a Turkish stronghold 20 miles within the Palestinian frontier. Allenby was given reinforcements, many from the Western Front, to use at Gaza and to take Jerusalem---a strategic objective that the English Prime Minister, Lloyd George, wanted taken by Christmas to boost Allied morale.¹¹ When Allenby succeeded at Gaza and Jerusalem, the British government dedicated itself to eliminating Turkey from the war but its degree of commitment fluctuated. In the spring of 1918, the EEF was stripped of many of its veteran units to help counter the German offensive on the western front.

The British government complicated her policy in the theater and the efforts of the EEF commander by agreeing to the conflicting desires of her allies. The outbreak of the Arab Revolt against Turkish domination in June 1916 was supported by the EEF as a convenient thorn in the Turkish side. But Britain weakened her Arab policy by arranging

with France the secret Sykes-Picot Agreement that stated the latter's interests in Syria should be supported. By June 1917, however, the Arab Northern Army became a fully cooperative and coordinated arm of the EEF and Allenby saw that the Arab irregular forces supporting the Arab revolt were now more important to the EEF's success. However, the British pledge to the Jewish world in the Balfour Declaration further undercut agreements with Arab leaders.

Allenby's strategic guidance for the Palestine Campaign of 1918 was formulated by the military representatives of the Supreme War Council at Versailles on January 21, 1918 in Joint Note 12.¹² Partially inspired by Lloyd George and agreeing that there was little hope for major Allied success in Europe in 1918, the Allies decided that Turkey was a weak link in the enemy's coalition and that a decisive offensive should be launched to annihilate Turkish armies in the Palestine-Arabian Theater to collapse Turkish resistance.

Initially, Allenby was cautious and felt that his leaders were too optimistic in their belief that a quick offensive in his theater would bring Turkey to her knees. Resisting political pressures to quickly take Damascus, Allenby only agreed to launch an offensive in the spring as a step toward the long range goal of driving Turkey out of the war.¹³ Soon after receiving his strategic goal, Allenby defined the operational aim of the EEF.

He would launch a major offensive aimed at the defeat of the *Yilderim*---the German-Turkish Army Group in Palestine. The actual offensive would be preceded by a concentration and reorganization of forces. If the offensive was successful it would be followed by some form of exploitation toward Damascus. Allenby identified the main enemy force in Palestine as the enemy's center of gravity. From this point, he translated terrain objectives into force objectives and made this clear to his subordinate commanders. Only with this force defeated could the E.E.F. have any hope of pushing north and forcing Turkey to conclude a separate peace.

The Germans and Turks had their own aims and these were not always mutually compatible. The Germans had hoped the Turkish Alliance would lead to the closing of the Dardanelles between Russia and her Allies, weaken British influence in the region, and force the Allies to divert troops away from Western Europe. The Turks were bent upon territorial annexation and were fighting on three fronts. They were dependent on Germany for money and munitions and resented having to submit to Germany for some of their strategic direction. When Russia collapsed in civil war, Turkey gambled on a German victory in the 1918 offensive on the Western Front. They sent stockpiled supplies and six divisions into the Caucasus in a land grab.

On March 1, 1918 Marshal Liman von Sanders, one of the German architects of the Turkish victory at Gallipoli, took command of the *Yilderim*. Spreading disease, poor supply, and the taxing summer heat would weaken Turkish front line forces at a time resources were destined elsewhere. Strategic considerations placed upon him by Turkish decisions, to include Turkish refusal to give up any territory in *Yilderim's* hands, constrained Sanders' operational method. Furthermore, Sanders was a firm believer in the strength of the defense and believed this was the form of warfare to which his Turks were best suited. Sanders chose to defend in a continuous front with the forces he had and not to give ground voluntarily.

III. FROM AIMS TO MEANS

Allenby did not select his aims purely in a vacuum. Not only did he have to consider strategic guidance from his superiors but he also had to make a realistic evaluation of the means he could muster before selecting his aims. The "means" Allenby considered included terrain and weather, personnel, logistics capability, and morale. These means in varying degrees supported the attainment of the aims and it is this relationship which determined the feasibility of the aims.

The means of time and space are fundamental to the operational artist's canvas. For Allenby these were most

visible in the opportunities and constraints provided by the terrain and weather in Palestine. The most striking features of the area of operations in 1918 were the remarkable variety of terrain and climate, the seriousness of water difficulties, and the probable influence of the rainy season on his operations.

Allenby made two fundamental decisions. First, he would conduct his campaign during the dry season. The EEF's advance after capturing Jerusalem had been stopped by the arrival of the rainy season and the piecemeal commitment of enemy forces which had been preparing to go on the offense. During the rainy season, beginning in late October, large tracts of land became seas of mud, the few roads were impassable, and wadis flooded---all favoring a force on the defense. Allenby desired to begin his campaign in May but the German push on the Western Front in the spring of 1918 caused him to delay his start. When Allenby selected September he realized that his window of opportunity had been seriously shortened and the speed and tempo of the operation took on a new importance. The meticulous planning for water resupply and forage would be fundamental to any operation launched in that season.

As a second consideration, Allenby decided that his main effort would take place on his left to take advantage of the

theater's terrain. Sanders had deployed *Yilderim* from the coast plains, through the Jordan Hills, to the Jordan River Valley in an east-west direction (Map# 2, page 41.). Allenby began to envision the Jordan and the ranges west of it as terrain features that could bar an enemy's easy withdrawal. The coastal plain of Sharon was an historic invasion route and provided the best avenue of approach for an attacking force and for sustaining the main effort by land and sea. The plain led to similar terrain, but the way was interrupted by a narrow mountain belt which separated the coastal plain from the inland plains. Control of key passes through this belt would have operational significance for either force. The Turks were defending well forward of these passes and Allenby began to consider ways he could close the distance to these passes before his enemy could establish significant defenses to bar them from the EEF.

In addition to terrain and weather, the opposing commanders had to consider the personnel means at their disposal. Allenby would reorganize his E.E.F. ground forces into four corps-sized units. Since their lines of operation were converging Allenby was closely directing and synchronizing the operations of the Arab Northern Army and T.E. Lawrence's irregular Arab force (Map# 3, page 42.) We will discuss Allenby's force deployments later. Allenby was supported by the RAF's Palestine Brigade which by September had

won air superiority. Including his front line forces, which had 12,000 cavalry, his lines of communications troops, The Force In Egypt, an Egyptian Labor and Camel Transport Corps, and combat reserves Allenby's "ration strength" was estimated to be 340,000.¹⁴

The *Yilderim's* front line forces were organized into three armies. 8th Army, the largest Turk force, held the coastal sector on a front of 20 miles. It had three German battalions to bolster its defense, the bulk of *Yilderim's* artillery and its headquarters was at Tul Karm (Map# 2, page 41.). The 7th Army continued the line for another 20 miles through the Jordan Hills and into the Jordan Valley. Its headquarters was at Nablus. Finally, 4th Army was in the Jordan Valley and on the hills of Moab with the bulk of *Yilderim's* mounted force and a German regiment. Army headquarters was in Amman. Von Sanders had placed his GHQ at Nazareth. The largest local reserve force (3,000) was positioned near Haifa. Other forces in the immediate area were widely dispersed and loosely organized. In addition to front line troops, he had depot troops, rail line security forces, a few more scattered reserves, and laborers. *Yilderim* had some 247,000 troops south of Damascus.

The overall main battle line ratio of E.E.F. to *Yilderim* was 2.15 to 1.00. More importantly for the concept that Allenby would design, the E.E.F. enjoyed a qualitative and

quantitative differential in cavalry of four to one. Additionally, the *Yilderim* Flying Command was capable of achieving only local air parity for short periods of time.

The difference in numerical strength between opposing forces in Palestine was not as serious from the Turkish point of view as "the disparity of logistics means created by the capacity of their respective lines of communications."¹⁵ Although General Murray had been sacked because of his operations, Allenby was fortunate to be his successor because of the critical groundwork Murray laid in the logistical field. Murray left Allenby an EEF that had developed a logistical system that had subdued a line of communications across the Sinai. By early 1917, the EEF had expended:

30,000,000 sandbags, 2,000,000 square feet of timber, 50,0000 rolls of wire netting, and 7,000 tons of barbed wire. In addition, 220 miles of macadamised roads were constructed, 359 miles of railway, and 300 miles of water pipes.¹⁶

Additionally, the burden on strategic SLOCs had been lessened considerably by the organization of local resource boards which had been the creation of the EEF's impressive Quarter Master General, Sir Walter Campbell.¹⁷ The EEF relied heavily upon "host nation support" and maintained a large civilian labor force by paying above the usual market rate for labor.¹⁸ Operational maneuver rested on logistics planning in this immature theater and Allenby was prepared to maximize the benefits that a system developed through experience and

innovation could afford him.

Allenby used the early part of the 1918 dry season to continue to expand and improve his LOCs by rail from the EEF theater base in Alexandria, Egypt through the Sinai to Jaffa, Palestine in the EEF's forward area. At Jaffa his railway met a supplementary intratheater SLOC. Allenby had his forward supply base located at Lydda (Map# 2, page 41.) As Arab lines of operation converged with the EEF's in the spring and summer of 1918, Allenby was able to provide additional support to these forces (Map# 3, page 42.). Prior to the final campaign the Royal Navy's Red Sea Squadron provided a floating logistical base and seaplanes to support Arab operations. To assist Allenby in his final plan, Lawrence was given two companies of transport camels which gave Lawrence the ability to project a force of 4,000 in an 80 mile radius. Allenby also gave him money, ammunition, additional rifles, aircraft support, and machine guns to bolster the Arab effort.

Allenby did not feel compelled to adhere to logistical doctrine and accepted innovation and the reallocation of resources to best support his operational plan. In this campaign, he would have his Desert Mounted Corps exchange its camel transport for trucks from his forward infantry units that did not have a line of advance along the Jerusalem-Nablus Road.¹⁹ In this way he hoped to consolidate his vehicle transport and support the rapid advance of his mounted forces

with water and forage. Major General Wright of the Corps of Royal Engineers was given the task of planning for water supply which included giving advanced forces engines and pumps.²⁰ Allenby directed construction material be stockpiled to begin the extension of his rail lines as soon as the tactical situation permitted. He had plans prepared for the expansion of Haifa as a small port to support possible exploitation operations. Despite the growing length of his LOCs, Allenby took the greatest care to develop them to cope with his operational plan and not be hamstrung by supply difficulties.

His opponent, on the other hand, was suffering from an inefficient logistics system. In addition to the great length of rail ways from Constantinople to the Palestine Front (1,275 miles), the five transshipments required by non-standard gauges, and the absence of mountain tunnels, the Turkish rail system suffered from poor management and a shortage of rolling stock, maintenance facilities, and fuel. Turkish transport animals were in terrible condition since the LOCs were not delivering adequate forage. There was a shortage of vehicles and there were few hardpacked or metalled roads to support heavy wheeled traffic behind Turkish lines. Medical supplies and facilities were scarce. Because of the trickle of supplies there was no major buildup of ammunition stockpiles in forward positions. Although front line forces

had received some building materials and wire since Sanders had taken command, they were not in sufficient quantities to erect formidable fortifications and obstacles in any depth for a defense. There had also been a serious deterioration in Yilderim's maintenance of combat equipment when it lost most of its forward workshops in the fall of Jerusalem. Remaining aircraft had difficulty sustaining operations because of the lack of spare parts.

The weight of materiel was certainly in Allenby's favor. Yet, the decisive qualitative differential was in the morale of the opposing armies, and this was the most important means available to Allenby.

Turkey's multi-front scenarios created an absence of a decisive theater and the over-taxing of the soldier and the ignorance of his needs. The impact of recent defeats in the theater, generally poor and often brutal leadership exacerbated by the tensions between Turkish and German officers, and the degenerative internal conditions of the Turkish Army produced an inferior soldier by 1918. Physical deprivation as a result of their poor lines of communications sapped morale. Turkish forces on the whole were ill-fed, ill-clothed, and war weary. Now in fairly static defensive positions as the summer wore on, diseases spread through the ranks and medical care remained abysmal. Sanders did some reorganization of his rear to free up more combat troops and to decrease the

inefficiency and corruption of his rear services, however, he realized by mid-July that Turkish troops had seriously deteriorated. He concluded that his German troops would be the backbone and spirit of his defense. As Allenby began planning for the 1918 campaign, he and the EEF still respected the Turks as tenacious fighters on the defense. In the Gaza battles and the fights around Jerusalem, they had deployed well trained artillerymen, had revealed that they had more machineguns than the EEF, had shown a fine eye for terrain, and had proved their skill in planning and entrenching a position. Allenby's estimation of the Turks began to change, however, as the summer progressed.

In Allenby's own camp, his EEF and associated forces were in high spirits from recent victories, more than adequate logistics support, and confidence in their leadership. As the operational commander Allenby was instrumental in developing and maintaining high morale in his forces.

When he first arrived in the theater EEF morale was low after the repulses at Gaza. Allenby immediately moved his GHQ from Cairo to Palestine and spent his first five days visiting deployed units. This set the tone for the rest of his command. He rarely left the front and then only for a day or two. He was continually with his troops and insisted on Spartan conditions for his GHQ. A junior officer commented, "...No commander inspired his troops with greater confidence

than he. With his arrival a kind of fresh vitality appeared amongst us."²¹ Allenby quickly pushed his inherited supply and transportation system to provide additional canteens, tenting and a short leave program--- all which endeared him to his soldiers. When the EEF took Gaza on the third try, Allenby was seen as a winner.

With a lower percentage of casualties and less continuous combat than on the Western Front, Allenby could dedicate more time to preparing and training forces for major operations. This was particularly important to the EEF which consisted of English, Irish, Welsh, Australian, New Zealand, Indian, French, Arab, and Jewish forces. Allenby used valuable time to work out some common procedures and communications. He was concerned about the tactical proficiency and welfare of all his forces. He often rotated forces out of unhealthy locations in the line to train and to recover health.

As the summer months went by, Allenby continuously reappraised his plans as he came to a better appreciation of the deteriorating condition of the enemy and the improving quality of his reorganized force. In the late spring and early summer of 1918 Allenby lost almost 60,000 troops to the Western Front to meet the German offensive there. The majority of this number came from his front line infantry. The 52nd and 74th Divisions were withdrawn entirely and their places

were taken by the seasoned 3rd and 7th Indian Divisions from Mesopotamia. Except for the 54th Division, 75% of the remaining infantry battalions were withdrawn and replaced by fresh and untried Indian battalions.²² His veteran cavalry remained almost untouched, however, and Allenby desired to find some way to use the mobility edge he had over the Turks. The EEF began an intensive training program and raids and small scale operations were used to strengthen and stabilize the line, give new units experience and confidence, and draw forces from areas of Arab irregular activity. Allenby made daily visits to troop units to keep apprised of training and unit morale giving his soldiers, as one recalled, "small items of good news to cheer us, giving a word of encouragement."²³

At the same time, Allenby was aware of the monthly increases in Turkish deserters. By August the Turks knew of the failure of the German offensive on the Western Front. Civil control in rear Arab areas was disintegrating. Sanders turned down the dubious honor of being named a civil governor because he described the civil situation as "hopeless."²⁴ Turkish soldiers had not heard from their families in months or years, but one EEF officer wrote, "with Lord Allenby all things were possible; we received our letters and rejoiced."²⁵ In the last month before the campaign began more than 1,100 Turks deserted to the EEF lines. With Allenby's approval British intelligence exacerbated the poor conditions for

Turkish soldiers with a propaganda campaign that focused on two messages: 1) Turkey was being exploited by Germany; 2) Turkish prisoners of war in EEF camps ate better than Turkish soldiers.

Having considered and cultivated his means Allenby had to choose his "ways." The plan he ultimately chose would take advantage of his means by stressing operational maneuver.

IV. FROM MEANS TO WAYS

In essence, operational art is the selection of methods of applying combat power in a campaign. As discussed earlier, Allenby sought a major battle with the *Yilderim*. As the operational commander, Allenby prepared, moved, and organized his forces and selected where that force would be best applied so that he could set the conditions for his subordinate commanders to achieve tactical success in battle.

In assessing the terrain and his enemy while stabilizing his line before the final drive was launched, Allenby came to two important conclusions. First, he rejected a plan prepared in February by his staff and Lieutenant-General J.C. Smuts, acting on behalf of the War Office and The Supreme War Council. The Smuts plan envisioned the main effort in a Murray-like advance pushing a standard-gauge railway to Haifa then to Beirut. A secondary column would march with the railway from

Haifa through Deraa on Damascus in conjunction with the Arabs. Another 388 miles of rails were needed for a double track to Haifa and a single to Beirut.²⁶ Later, London considered giving him some more divisions in July to take Haifa and Nazareth.²⁷ The problem with this plan was that it did not take advantage of any of the EEF's strengths except for its weight in manpower and firepower. Allenby possessed command of the sea and a preponderance of strength in cavalry, aircraft, and mobile transport. Any gain provided by initial surprise would be soon lost and the slow advance might hurt the momentum that Arab forces were now experiencing. Minor operations in the Jordan and Judean Hills had proved conclusively that *Yilderim* would hold tenaciously to the hills and key terrain. A slow advance would give the EEF heavy losses and lessen chances for a successful move on Damascus. This plan would leave the Turks with most of their railroad in and out of Damascus south through Deraa down the Hejaz line. It would not lead to a major defeat of *Yilderim* and, in Allenby's estimation, would delay the achievement of strategic goals.

The second conclusion Allenby reached, and this provided another reason for his rejection of the initial plan, was that he wanted to take advantage of *Yilderim's* weaknesses and concerns. The key to *Yilderim's* position was its line of communications (Map# 2, page 41.). All three Turkish Armies

depended on a single artery of railway communication from Damascus which branched at Deraa. One line went south to the Hejaz into the desolate region east of the Jordan. The 4th Army depended on this line for its communications and for its line of retreat. From Deraa another branch went west across the Jordan to El Affule, where it branched again with one arm toward the sea and Haifa and the other southwards toward the 7th and 8th Armies. Control of Affule and the Jordan crossings near Beisan would sever communications to these armies and force their retreat into the trans-Jordan. Two major EEF raids east of the Jordan confirmed Turkish paranoia in the Deraa-Amman sector. Deraa Station was key to *Yilderim's* LOCs. These raids caused the enemy to extend their defenses to the Hejaz rail line to prevent envelopment and loss of the line. This decision and the number of Turkish soldiers now tied down and overextended by the advancing Arabs spread the Turks dangerously thin.

Allenby wove the EEF's strengths and *Yilderim's* weaknesses into a plan that set the conditions for operational maneuver and simultaneously presaged *blitzkreig* tactics. Allenby's plan integrated joint and irregular forces into a skillful combination of concentration, deception, fires and maneuver. On 1 August, he revealed his first plan to his corps commanders.

First, Lawrence's irregulars and the Arab Northern Army

were needed against the Turkish left to consume their resources, to threaten Deraa, to help convince *Yilderim* that the major offensive would fall in the Trans-Jordan, to draw off reserves, and finally---once *Yilderim* discovered its mistake---to prevent 4th Army's transfer of forces to its jeopardized right flank.

Second, together with massed artillery and naval gun fire support, Allenby would secretly mass his infantry, under General Bulfin and XXI Corps, followed by his Desert Mounted Corps, under General Chauvel, on his left on the coast plain. The infantry would roll up *Yilderim's* right and go as far as Tul Karm. The mounted force would then go to Messudieh-Sebustiye. If successful, the mounted force would then exploit with one division blocking roads into Nablus and one or more divisions advancing north to seize Haifa, a port town that could be used to support future operations into Syria.

Three weeks later, encouraged by the continuing decay of his opponent, sensing his deception was working, and more confident of his reorganized forces, Allenby notified his corps commanders of modifications to his plan. Allenby felt the first plan was too limited; his was the classic dilemma of the shallow versus deeper envelopment. The first plan turned the flank of 8th Army but only threatened the retreat of 7th Army and might have left 4th Army to withdraw in good order. The initial plan might have led to the defeat of the

enemy but it would not provide for its immediate destruction. Allenby now believed he was closer to achieving the long term strategic and operational aim of annihilating Turkish forces.

Allenby's amended plan reflected a decision to launch a single decisive major operation that would meet the strategic aims. Allenby believed his infantry could quickly break the Turkish defensive lines and permit the cavalry to reach the hill passes that led to the Plain of Esdraelon before the enemy could block them with substantial forces. He directed XXI Corps to assume the task formerly allotted to the Desert Mounted Corps of continuing the advance to Sebustiye and Nablus. The Desert Mounted Corps would now advance to El Affule, while sending a force to Nazareth to strike the enemy's GHQ, and then to Beisan---key rail and road junctions. The seizure of these "decisive points," as they would be called in Jominian theory, would leave the 8th and 7th Armies with only one extremely narrow and difficult avenue of escape across the Jordan behind 4th Army's deployments.²⁸ If XX Corps, commanded by General Chetwode, in the center and Chaytor's force on the far right flank were successful in pinning 7th and 4th Armies long enough, it would be impossible for the three armies to extricate themselves in good order through one route.

Allenby's final plan, using Jomini's term, was constructed of a series of "combinations."²⁹ XXI Corps would initially

conduct a penetration and then an envelopment. XX Corps and Chaytor's Force would have economy of force operations that would pin enemy forces with secondary actions. Finally, the Desert Mounted Corps would extend the envelopment to the enemy's operational depth and then continue to exploit success.

What is most impressive about Allenby's plan and the EEF's subsequent execution is the development of operational maneuver. Allenby moved the EEF from static warfare to mobile warfare, something that never occurred at operational depths on the Western Front. Allenby achieved this by using his means in ways that would create the conditions for operational maneuver.

As we defined it earlier, maneuver is the movement of forces to gain a positional advantage over the enemy. Its purpose is to concentrate forces at a critical point to achieve surprise, shock, and physical momentum over the enemy.

Essential to the success of Allenby's plan was the selection of the main effort, the *schwerpunkt*, directed at decisive points along the Turkish LOCs. In XXI Corps' zone at the selected point of attack at 0430 19 September, Allenby achieved a force ratio of 4.4 to 1.00 and an artillery ratio of 3 to 1.³⁰ Allenby's concentration of forces on the enemy's right flank was accompanied by a major deception plan to reinforce the enemy's belief that the main effort would come on

his left. Although Deraa Station was the key to Turkish LOCs, time and distance factors put it beyond a swift uninterrupted cavalry ride for the EEF. Therefore, Allenby decided to make use of Deraa in another fashion. Since the Turks were concerned about its security and they had seen Allenby use their left flank for his main effort at Gaza, Deraa became an important part of Allenby's deception plan which was designed to create the impression of major activity in the east to conceal the concentration toward the coast. He used Arab forces and EEF raids to threaten Deraa and immobilize large portions of the Turkish forces. Extensive measures were taken to cover the movement of forces and to simulate with dummy locations the concentration of forces where the Turks expected them. The RAF was essential to this deception operation and it maintained a defensive counterair campaign that frustrated *Yilderim's* aerial reconnaissance. Equally important was the use of aircraft to check friendly camouflage efforts. Captured enemy reports indicated that enemy air photos from 1 to 16 September interpreted the EEF's GHQ at Bir Salem to be a reserve infantry encampment.³¹ Two days before the EEF's attack, the Arabs under Lawrence cut Turkish communications north and west of Deraa and Sanders responded by sending the bulk of his reserves at Haifa to Deraa.

But mere concentration is not sufficient by itself to

assure the success of operational maneuver. Surprise, shock, and initial tactical success are also essential. In many ways, they were accomplished by Allenby's direction of operational fires and the use of techniques that were precursors to *blitzkreig* tactics.

Allenby had been unsuccessful in convincing his superiors on the Western Front to abandon long massive artillery "preps" that gave the enemy time to prepare for the following attack. In this campaign, Allenby had his way and he directed an accurate surprise 15 minute barrage from naval and field guns designed to support the infantry in seizing their initial objectives. Fires were then shifted to the enemy's depth and against his field artillery. At the same time, aircraft went after *Yilderim's* command and control. The first target was the enemy's central telephone and telegraph exchange at El Affule. Priority then shifted to *Yilderim's* GHQ at Nazareth and 8th and 7th Army Headquarters. Then enemy airfields were hit. This coordinated air strike and a subsequent ground attack on Nazareth on 20 September kept General Von Sanders in the dark about the actual fate of *Yilderim* and the pace of the EEF advance for days.

The infantry had led the way initially bypassing some strongpoints and sectionalizing the enemy. They then began the wheel to their right holding the door for the deeper penetration by the mobile forces. Having achieved initial surprise

and having degraded the enemy's ability to organize and control a response, the Desert Mounted Corps was now released driving for maximum irruption. It bypassed local pockets of resistance in a drive to close *Yilderim's* line of retreat---an indirect and in this case effective way of psychologically unhinging the enemy to achieve "moral dominance" through maneuver.³² As the mounted force drove toward the enemy's rear, air reconnaissance sorties kept advancing columns and GHQ informed about enemy movement and withdrawal. By the evening of the 20th, 8th Army ceased to exist as an organized formation and 7th Army was crumbling. On the 21st, Allenby directed his air assets to begin interdicting previously identified passes and chokepoints along the enemy's withdrawal routes. During these three days, diversionary attacks by XX Corps, Chaytor's Force, and the Arab Northern Army pinned enemy troops and prevented the transfer of reinforcements to the main danger.

When the port town of Haifa fell on the 22nd of September, Allenby directed that an infantry division from XXI Corps relieve the cavalry there to release them for the next phase of the campaign---the pursuit to Damascus and Beirut! A discussion of the next phases of the campaign is best presented with a focus on the final operational planning factor.

V. ASSESSING AND ADDRESSING RISK

An operational commander's considerations regarding the consequences of defeat or failure lead to his assessment of risk. As we determined earlier, risk is in part a measure of the friction of war in probalistic terms. The opposing commanders in this campaign made their own assessments of risk and they addressed them in ways that had great influence on their plans and on the execution of those plans.

When Liman von Sanders took command of the *Yilderim*, he was a German General of Cavalry, a Field Marshal and the Inspector General of the Turkish Army. He had been the head of a military mission to rebuild and assist the Turkish Army in 1913 but war broke out before very much was accomplished. He did help the Turks orchestrate their victory at Gallipoli but he also witnessed the sad decay of Turkish cavalry caused by disbanding many Arab and Kurdish units because of their political unreliability. Von Sanders was never very impressed with the Turkish Army and he felt Turkish officers learned an "excess of theory" while Turkish soldiers and operations were devoid of "a sense of order and cleanliness and diligence."³³ He was often at loggerheads with Turkish authorities and was unable to convince the Turks to give up the beseiged Medina and send its garrison to his *Yilderim*

when he became the commander in March 1918. He deemphasized his predecessor's reliance on an elastic front with strong points and counterattacks and went to a more continuous and linear front. Knowing the EEF could read his cipher codes he deliberately fed them disinformation on the arrival of substantial reinforcements to gain time and delay an EEF offensive in the hope that the German effort on the Western Front would change the strategic situation. In the meantime, Sanders became more and more convinced that the EEF's effort would come on his left and he placed his best Turkish Army commander there. He also dedicated over one third of his combat power to the Arab threat. In so doing, he illustrated the other part of risk---the exposure of a vulnerability. He stretched and, thus, exposed to risk his less mobile forces in a forward defense with little operational depth. In the beginning of September, despite Turkish protests, he contemplated a voluntary retirement north to a position where he could rest his right on the Lake of Tiberias and the rest of his force in the Yamuk Valley but "I gave up the idea because we would have had to relinquish the Hedjas [Hejaz] railroad and the East Jordan section, and because we no longer could have stopped the progress of the Arab insurrection in rear of our army."³⁴ When Sanders moved his headquarters to Nazareth to better control what he believed would be a linear trench battle with the enemy's main effort on his left he played into Allenby's

hands. Sanders was forced to relocate his headquarters three times in six days and despite numerous attempts could never regain control of his army group.

While Allenby took care to minimize the needs for risks, he was quite willing to take risks to succeed. His attention to health needs, logistics details, and training prepared his force to contend with the inevitable friction of war and the numerous tactical engagements that took place in this campaign. His troops were in the moral and physical condition to give their best. Allenby rejected the more conservative approach approved by the War Office for the risks of operational maneuver, which rested heavily on the success of his deception and his undiscovered concentration. The importance of planning and preparation and Allenby's leadership were extremely evident in the rapid moves on Damascus and Aleppo.

Allenby issued orders on the 25th and held a meeting with his corps commanders on the 26th of September to discuss the pursuit to and the encirclement of Damascus. He ordered XXI Corps to send one division up the coast to Beirut, the main port for Damascus; it was undefended and fell to them a few days later. He directed the Desert Mounted Corps and the Arab Northern Army to move on separate routes to complete an encirclement of Damascus (over 100 miles distant) on 30 September (Map# 4, page 43.). No official plans had been issued for Damascus until the offensive was well under way. This

second bound was a sequel in the campaign based upon the outcome of the opening move and Allenby wanted his staff and subordinate commanders to focus on the task immediately at hand. However, Allenby and his staff had studied the possibility and it was apparent that the move would have to be made quickly if at all. There was insufficient transport to sustain the bulk of the EEF beyond Haifa until the rails were expanded and the ports of Haifa and Beirut were developed. There was also the pressing motivation from his own soldiers. His medical officers had warned him that two weeks after entering the malaria-and-influenza-infested Turkish lines his men would begin dropping. Yet, by combining local procurement, some limited supplies through Haifa, and placing the Desert Mounted Corps on half rations it and the Arab Northern Army could reach Damascus in 5 days!³⁵

Allenby's efforts to "see" the battlefield gave him important impressions of friend and foe and the confidence to order the advance on Damascus. On the opening day of the battle he had been at XXI's headquarters. On the 21st he visited XX Corps and the new headquarters of the Desert Mounted Corps at Megiddo. The EEF estimated that there were still 40,000 Turks between the EEF's lines and Damascus. Most of these were now trudging northward in ragged columns and it was important to press the pursuit before they could be reorganized into a cohesive force.

Allenby's maxim of relentless determination in the pursuit was a product of an impressive military judgement honed by his previous military experience. Allenby had expanded many of the tactical lessons he had learned in the Boer War to the operational level to include: feinting one flank and crushing the other, the use of cavalry forces to block the withdrawal of a larger force, the criticality of the prior state of mounts and their forage to a pursuit, and the costs of letting a beaten enemy have a breathing spell.³⁶ He had been the Inspector General of the Cavalry. He had commanded a British Cavalry Division before the war, then the Cavalry Corps, then his own 5th Corps, and finally 3rd Army on the Western Front. At the Battle of Arras in April 1917, he was unable to get the cavalry to a breakthrough that had been created for them. Under something of a cloud from Arras, he was determined to find the right balance of infantry, joint firepower, and cavalry shock action in Palestine. At the Battle of Gaza, Allenby reportedly told a senior staff officer dubious of extensive goals:

In pursuit you must always stretch possibilities to the limit. Troops having beaten the enemy will want to rest. They must be given as objectives, not those you think they will reach, but the farthest that they could possibly reach.³⁷

On October 2, 1918 T.E. Lawrence was instrumental in over-seeing an Arab government established in Damascus.

Allenby resisted the War Cabinet's urging to take Aleppo

quickly. He paused, reorganized, and devised a solid plan for this final phase of the campaign. The 200 mile distance, continued supply problems, and spreading disease were now his main obstacles. Although Allenby estimated that there might still be 15,000 Turkish troops ahead of him, aerial reconnaissance and Arab spies convinced him that they could not be sufficiently organized and concentrated in the near future.

Impressed by the aggressiveness and spirit of General MacAndrew and his 5th Cavalry Division, Allenby formed a special force on 16 October. Believing an advance northward would face some tough local pockets of resistance he formed a force of 3,000 cavalry, two reinforced artillery batteries, six armored car companies, and a supporting air squadron that combined forces from the Arab Northern Army and the EEF's 5th Cavalry. This force was given the priority of support from Beirut. Civil unrest, Arab infiltration into the city, and an overestimation of the strength of this special force caused a 3,200 man Turkish garrison to abandon the city on 26 October.

With the failure of her German ally on the Western Front, the collapse of Bulgaria, and her crushed southwest flank in Palestine and Syria, Turkey signed an armistice on October 31, 1918. From 19 September to 31 October the EEF had pushed the front back 350 miles. It had captured 75,000 prisoners, 360 pieces of artillery, 210 trucks, and 89 train engines. In exchange, the EEF took 5,666 casualties with 853

killed.³⁸

VI. SOME CONCLUSIONS AND IMPLICATIONS

Surprise, mobility, and concentration were the keys to Allenby's initial victory, and this initial success was followed by a relentless determination in the pursuit to achieve total victory. Allenby developed a plan that capitalized on his particular means to create conditions of fluid operations which achieved his superiors' aims. Allenby was not overcome by the technology of his time as others seemed to be in World War I. He managed it well. In many respects, Allenby's initial operations were a precursor to the Second World War's *blitzkrieg*. Allenby drove his EEF and associated forces to total victory with the force of his will---indispensable to the mobile operations he created.

Theater peculiarities, advanced munitions, and the quality and doctrine of opponents will change but Allenby's campaign suggests some important lessons for current operational planners. First, the phased employment of air assets remains impressive by modern standards. Aircraft were first used to deny enemy intelligence, protect the concentrating force, and acquire intelligence about the enemy. Then aircraft were used

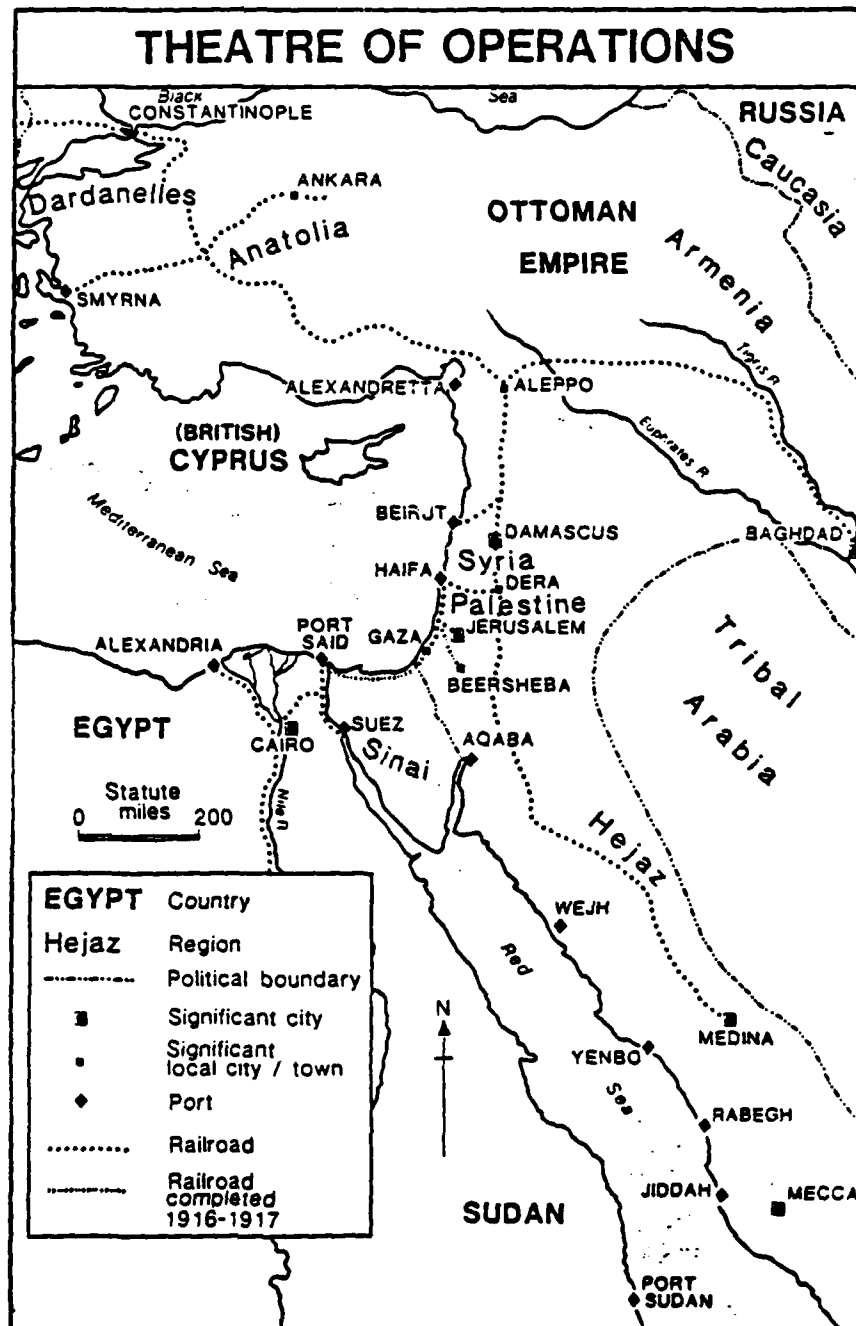
to cripple command and control centers and destroy enemy air power. Scout aircraft observed the enemy and relayed information to appropriate headquarters while fighters and bombers interdicted retreating columns. Finally, aircraft accompanied the deep pursuit columns in the final phases of the campaign to protect the force and provide mobile firepower. This campaign stands as an historical model for the integration and synchronization of air and ground operations in a scheme of operational maneuver.

Second, Allenby's use of irregular forces to complement conventional forces is instructive. Allenby's focus for his conventional units was the concentration of force, whereas Lawrence's focus for his operations was dispersion. In this campaign, Allenby did not need the Arabs to defeat the Turks but their efforts so distracted and weakened the Turks that a more complete victory was possible sooner. Although he ended this operation exhausted and feeling guilty for betraying the Arab cause, Lawrence, through the brilliant application of guerrilla force, took advantage of the Turk's material dependency. Allenby's creative use of Arab forces increased the mobility and depth of his operations.

Finally, Allenby's campaign offers an illustrative example of how to create initial conditions for operational maneuver and how to sustain it by maintaining a tempo of operations. It would appear that the enemy must be kept

"frozen." Initially, one can accomplish this with deception, surprise, and the use of combinations. Then, if continual shocks are administered to his command and control, he will be kept off balance and unable to respond in a timely manner to the maneuver efforts. Commanders can seek to influence the timing and tempo of military actions by seizing the initiative and operating beyond the enemy's ability to react effectively. Allenby did this by mixing surprise, mass, and maneuver to take advantage of fleeting opportunities. Logistics planning becomes critical to the sustainment of the maneuver tempo to prevent the enemy from gaining a breathing spell. Allenby's flexible logistics system and concepts created the effective logistics that could respond to the pace and intensity of the pursuit.

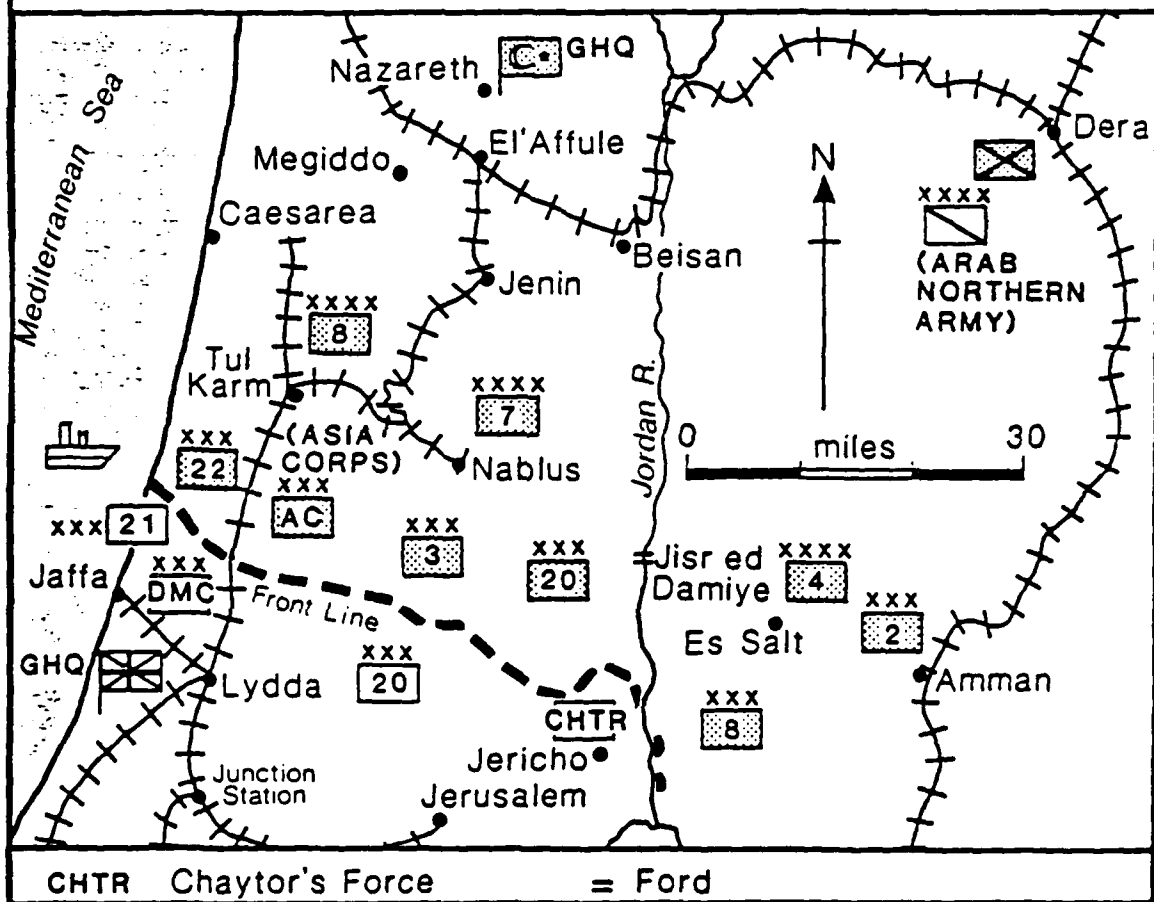
Allenby's effective use of all of his assets to their maximum potential makes this campaign important not only to the evolution of the operational art but to current planners today. In this last regard, Lawrence's adulation is not overdone: "... the perfection of this man who could use infantry and cavalry, artillery and Air Force, Navy and armored cars, deceptions and irregulars, each in its best fashion!"³⁹



Map# 1

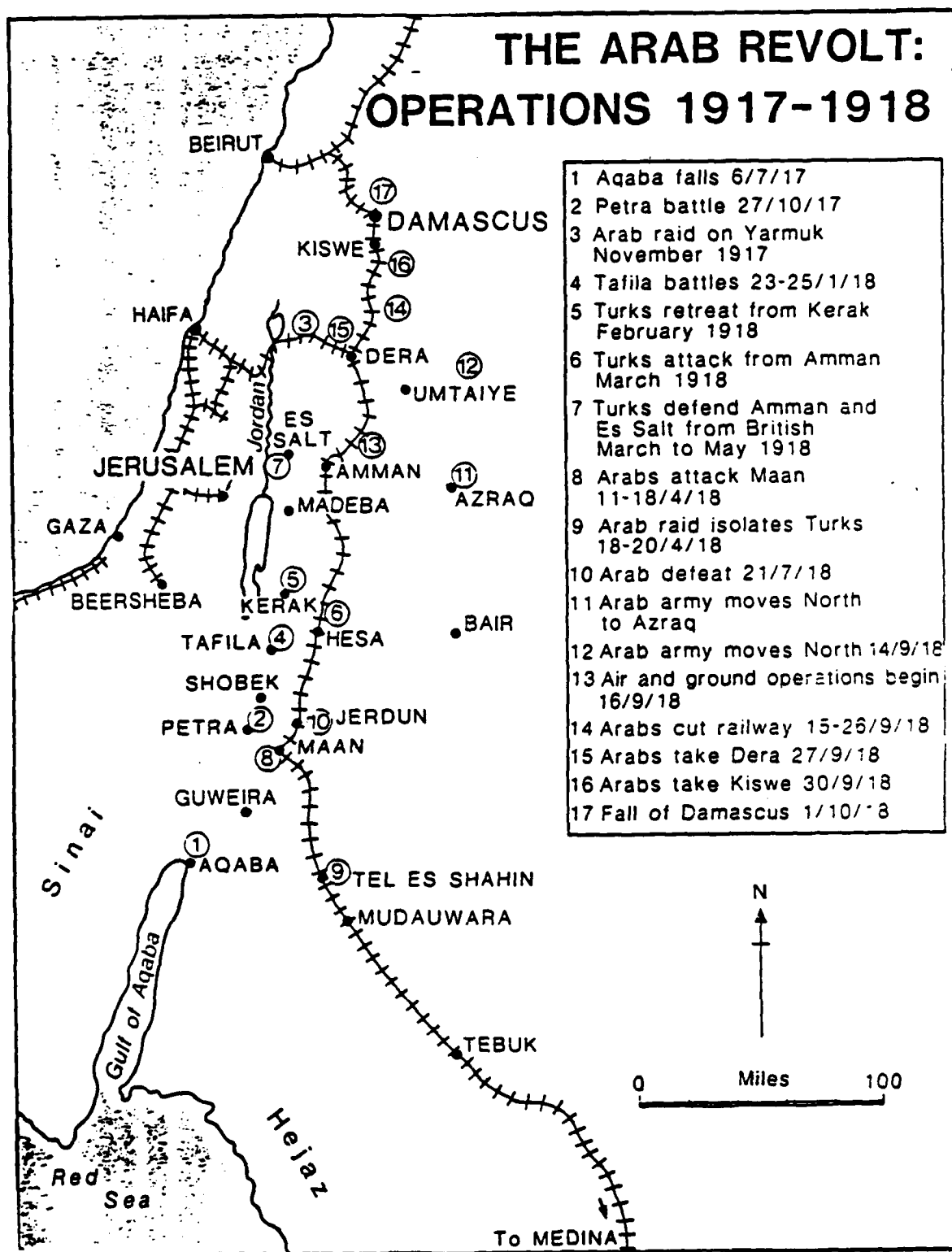
SOURCE: David L. Bullock, Allenby's War. (New York: Blanford Press, 1988), p. 1.

ARMAGEDDON 19 SEPTEMBER 1918 "ZERO HOUR"



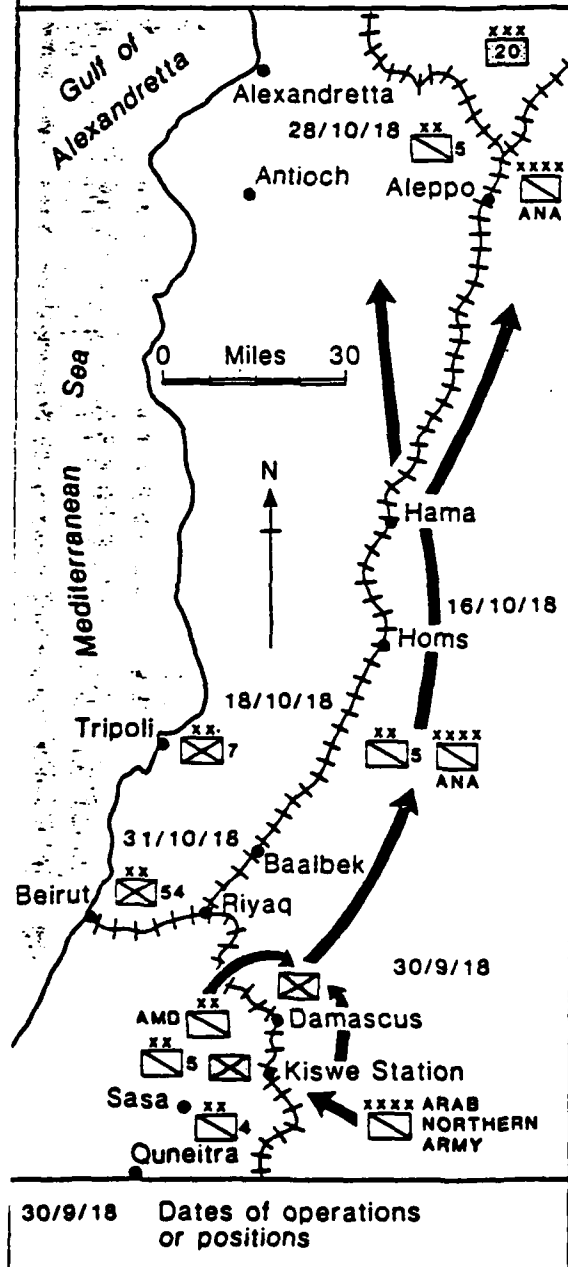
Map# 2

SOURCE: David L. Bullock, Allenby's War (New York: Blanford Press, 1988), p. 130



Map# 3
SOURCE: David L. Bullock, Allenby's War (New York: Blanford Press, 1988), p. 87.

THE FALL OF DAMASCUS AND THE ALEPPO ADVANCE 30 SEP-28 OCT 1918



Map# 4

SOURCE: David L. Bullock,
Allenby's War (New York:
Blanford Press, 1988),
p. 143.

ENDNOTES

1. Field Manual 100-5, Operations (Washington, D.C.: HQ, Department of the Army, 1986), pp. 130-131.
2. Jacob W. Kipp, "Mass, Mobility, And The Red Army's Road To Operational Art, 1918-1936." A paper for the Soviet Army Studies Office (Fort Leavenworth, Kansas: U.S. Army Combined Arms Center, 1987), p. 11.
3. For an example of this type of focus see Cyril Falls, Armageddon: 1918 (The Nautical And Aviation Publication Company of America, 1979), p. vii.
4. B. H. Liddell Hart, Strategy (New York: Frederick A. Praeger, 1968), p. 199.
5. Field Manual 100-5, p. 11.
6. Ibid., p. 12.
7. Ibid., p. 10.
8. Ibid.
9. A.P. Wavell, The Palestine Campaigns (London, England: Constable and Company, 1928), p. 15.
10. Falls, Armageddon: 1918, p. 2.
11. David L. Bullock, Allenby's War, The Palestine-Arabian Campaigns, 1916-1918 (New York: Blanford Press, 1988), pp. 46, 66.
12. Ibid., p. 100.
13. Falls, Armageddon: 1918, p. 157.
14. Estimates of opposing troop strengths are still debated today and the destruction of many of *Yilderim's* records during the campaign does not help the situation. This estimate and the subsequent estimate for *Yilderim* is the most current and can be found in Bullock, Allenby's War, p. 127.
15. Falls, Armageddon: 1918, p. 24.
16. Bullock, Allenby's War, p. 29.
17. W.T. Massey, Allenby's Final Triumph (New York: E.P. Dutton And Company), p. 13.

18. Ibid., p. 15.

19. Cyril Falls and A.F. Becke, Military Operations Egypt and Palestine From June 1917 To The End Of The War (London, England: H.M. Stationery Office, 1930), p. 458.

20. Ibid., p.459; Massey, Allenby's Final Triumph, p. 15.

21. John N. More, With Allenby's Crusaders (London, England: Heath Cranton Limited, 1923), p. 57.

22. Henry Osmond Lock, With The British Army In The Holy Land (London, England: Robert Scott, 1919), p. 134.

23. More, With Allenby's Crusaders, p. 57.

24. Bullock, Allenby's War, p. 118.

25. More, With Allenby's Crusaders, p. 139.

26. Falls, Armageddon: 1918, pp. 157-158.

27. Massey, Allenby's Final Triumph, p. 5.

28. Antoine-Henri Jomini, The Art Of War (Westport Connecticut: Greenwood Press Publishers, 1973), pp. 77, 80, 170-171.

29. Ibid., p. 171.

30. Bullock, Allenby's War, p. 127.

31. Massey, Allenby's Final Triumph, p. 15.

32. Field Manual 100-5, p. 12.

33. Bullock, Allenby's War, pp. 13-14.

34. Liman von Sanders, Five Years In Turkey (Annapolis, Maryland: U.S. Naval Institute, 1927), p. 273.

35. Falls, Military Operations, p. 458; Wavell, The Palestine Campaigns, p. 240.

36. Bullock, Allenby's War, p. 63.

37. A.P. Wavell, Allenby. A Study In Greatness (New York: Oxford University Press, 1941), p. 180.

38. Bullock, Allenby's War, p.147.

39. T.E. Lawrence, Seven Pillars Of Wisdom (New York: Penguin Books, 1976), p. 636.

BIBLIOGRAPHY

A. Books

Badcock, G.E. A History of The Transport Services of The Egyptian Expeditionary Force 1916-1918. London, England: Hugh Rees, Ltd., 1925.

Barnett, Correlli. The Swordbearers. Bloomington, Indiana: Indiana Press, David L. Allenby's War. The Palestine-Arabian Campaigns, 1916-1918. New York: Blandford Press, 1988.

Clausewitz, Carl von. On War. Edited by Michael Howard and Peter Paret. Princeton, New Jersey: Princeton University Press, 1976.

Emin, Ahmed. Turkey In The World War. New Haven, Connecticut: Yale University Press, 1930.

Falls, Cyril and A.F. Becke. Military Operations Egypt And Palestine From June 1917 To The End Of The War (Parts I & II). London, England: H. M. Stationery Office, 1930.

Falls, Cyril. Armageddon: 1918. The Nautical and Aviation Publishing Company of America, 1979.

Ferro, Marc. The Great War, 1914-1918. Boston, Massachusetts: Routledge & Kegan Paul, 1982.

Great Britain War Office. The Advance Of The Egyptian Expeditionary Force. 2nd Ed. London, England: H.M. Stationery Office, 1919.

Hart, B. H. Liddell. Strategy. Second Revised Edition. New York: Frederick A. Praeger, 1968.

_____. T. E. Lawrence, In Arabia And After. London, England: J. Cape, 1934.

Jomini, Antoine-Henri. The Art Of War. Translated by H.H. Mendell and W.P. Craighill. Westport, Connecticut: Greenwood Press, Publishers, 1973.

Lawrence, T.E. Seven Pillars of Wisdom. New York: Penguin Books, 1976.

_____. Revolt In The Desert. New York: Doran, 1927.

- Lock, Henry Osmond. With The British Army In The Holy Land. London, England: Robert Scott, 1919.
- Massey, W.T. Allenby's Final Triumph. New York: E.P. Dutton And Company, 1920.
- More, John N. With Allenby's Crusaders. London, England: Heath Cranton Limited, 1923.
- Sanders, Liman von. Five Years In Turkey. Annapolis, Maryland: U. S. Naval Institute, 1927.
- Stokesbury, James L. A Short History of World War I. New York: William Morrow and Company, Inc. 1981.
- Thomas, Lowell. With Allenby In The Holy Land. London, England: Cassell And Company, Limited, 1938.
- Tuchman, Barbara. The Guns Of August. New York: Macmillian Publishing Company, 1962.
- Van Creveld, Martin. Command In War. Cambridge, Massachusetts: Harvard University Press, 1985.
- Wavell, Archibald P. Allenby, A Study In Greatness. New York: Oxford University Press, 1941.
- _____. Allenby In Egypt. New York: Oxford University Press, 1941.
- _____. The Palestine Campaigns. London, England: Constable And Company, 1928.
- Whaley, Barton. Strategem: Deception And Surprise In War. Cambridge, Massachusetts: MIT Press, 1969.

B. Articles And Unpublished Studies.

- Hacker, Charles L. "Deception, Countersurveillance, And The Air-Land Battle." Unpublished thesis for the U.S. Army Command and General Staff College. Fort Leavenworth, Kansas: U.S. Army Command And General Staff College, 1985.

- Kipp, Jacob W. "Mass, Mobility, And The Red Army's Road To Operational Art, 1918-1936." A paper for the Soviet Army Studies Office. Fort Leavenworth, Kansas: U.S. Army Combined Arms Center, 1987.
- Lupfer, Timothy T. "The Dynamics of Doctrine: The Changes In German Tactical Doctrine During The First World War." Leavenworth Papers No. 4. Fort Leavenworth, Kansas: U.S. Army Command And General Staff College, July 1981.
- McDonough, James R. "The Marne: A Search For Theory." Unpublished monograph for The Advanced Operational Studies Fellowship Program (Hereafter AOSFP) for the School of Advanced Military Studies (Hereafter SAMS). Fort Leavenworth, Kansas: U.S. Army Command And General Staff College (Hereafter CGSC), 1987.
- Schneider, James J. "The Theory Of Operational Art." Unpublished Theoretical Paper No. 3 for SAMS. Fort Leavenworth, Kansas: CGSC, 1988.
- Snodgrass, James G. "Operational Maneuver: From The American Civil War To The OMG: What Are Its Origins And Wil It Work Today?" Unpublished monograph for AOSFP for SAMS. Fort Leavenworth, Kansas: CGSC, 1988.

C. Manuals And Government Publications.

- Field Manual 90-2, Tactical Deception. Washington, D.C.: HQ, Department of the Army, 1986.
- Field Manual 100-5, Operations. Washington, D.C.: HQ, Department of the Army, 1986.
- Field Manual 100-6, Large Unit Operations. (Coordinating Draft). Fort Leavenworth, Kansas: CGSC, September 1987.
- Reference Book 31-40, Techniques For Deception. Fort Leavenworth, Kansas: CGSC, July 1976.